**3GPP TSG-RAN WG3 #127 R3-250830**

**Athens, Greece, Feb 17th – 21st, 2025**

**Source:** **CATT,China Telecom**

**Title:** **(TP for WAB BL CR for TS 38.401) WAB mobility**

**Agenda Item:** **12.2**

**Document for:** **Agreement**

# 1 Introduction

Based on the agreements achieved during the on-line session for WAB, the TP to BL CR for TS 38.401 to support WAB mobility is provided.

# 2 Reference

1. Chairman notes of 3GPP TSG RAN3 meeting #127
2. R3-250356, (TP to BLCR for 38.401) On support of WAB, CATT, RAN3#127

# 3 TP to BL CR for TS 38.401

---------------------------------------START OF TP -------------------------------------------

## X.Y WAB-node mobility

X.Y.1 WAB-MT mobility

The WAB-MT reuses legacy mobility procedures defined for UE. During the WAB-MT’s movement, when the BH PDU session(s) of WAB-MT is re-established, the co-located WAB-gNB needs to update the IP addresses used for its traffic. In case IPsec tunnel mode is used to protect the WAB-gNB’s traffic, MobIKE can be used to avoid the change of inner IP addresses. Otherwise, following procedures can be used:

* NG-C and Xn-C can be migrated to the new IP addresses via legacy procedures defined in TS 38.412 and TS 38.422, respectively.
* NG-U GTP-U tunnels can be migrated via the NGAP PDU session Resource Modify Indication procedure.

The continuity of OAM connectivity of the WAB-gNB needs to be ensured as the WAB-MT moves across the BH network.

X.Y.2 WAB-gNB mobility

X.Y.2.1 With change of UE’s AMF(s)

Due to WAB-node movement, the change of UE’s AMF(s) may be needed, based on, e.g., WAB-node’s current location and/or additional criteria.

The WAB-gNB establishes NG connection(s) towards one or more new AMF(s). The WAB-gNB may obtain the configuration parameters needed to establish the connection(s) to the UE’s new AMF(s) based on its location via OAM. During the NG setup procedure towards the new AMF(s), the WAB-gNB need to report the new TAC to the new AMF(s).

The WAB-gNB may activate one or more new cell(s) with radio parameters different to the old cell(s), including TAC, cell ID, PCI, which are related to the WAB-node’s current location. The new cell(s) belong to a new logical WAB-gNB and the new logical WAB-gNB establishes NG connection(s) with new AMF(s).

Editors’ note: Above paragragh would be refined if the new cell(s) can belong to the WAB-gNB serving the old cell(s).

The UEs connected to or camping on the WAB-gNB are handled as follows:

- A UE in RRC\_CONNECTED state is handover from an old cell served to a new cell, and the UE’s AMF is changed to the new AMF via NG-based handover with AMF relocation, as defined in TS 23.502 [7].

- A UE in RRC\_IDLE or RRC\_INACTIVE state camping on the old cell reselects a new cell, and the UE’s AMF is changed to the new AMF via Mobility Registration Update procedure as defined in TS 23.502 [7] initiated at the UE.

The NG connections between the WAB-node and the old AMF(s) need to be removed via NG Removal procedure, and the old cell(s) are removed from service after all UEs in RRC-CONNECTED state are handed over to the new cell(s).---------------------------------------END OF TP -------------------------------------------